CLAIMS

1. A method of generating positive and negative ions comprising:

generating ac high voltage;

providing different polarity of the high-voltage to at least one pair of ionizing electrodes mounted in separate conducting cages located adjacent to each other, each of the cages provided with an opening opposite the electrode;

balancing ion currents emmited by each of the electrodes by providing a balancing unit, output from the ac high voltage being via the balancing unit to the electrodes, each electrode provided with different polarity; and

generating an external electric field by using the ion current from each electrode across to the cage in which the electrode is mounted, passing through an element for producing a voltage drop,

whereby some of the ions generated from the electrodes escape outside the cages due to the presence of electric field between the cages.

2. The method of Claim 1, wherein ion currents from both electrodes are passed through capacitive network common for these currents.

3. The method of Claim 1, wherein at least one of the ion currents emmited through the cage is used for providing a feedback signal for comparing the feedback signal with a reference signal to control the AC high-voltage generator, for stabilizing ion emmision.

4. The method of claim 3, wherein the minimal value of the feedback signal, below which a predetermined ion emission level is not supported, is used to indicate the need for cleaning or replacing of the electrodes.

5. The method of Claim 1, wherein at least one of the ion currents emmited through an electrode is used for providing a feedback signal for comparing the feedback signal with a reference signal to control the AC high-voltage generator, for stabilizing ion emmision.

6. The method of claim 5, wherein the minimal value of the feedback signal, below which a predetermined ion emission level is not supported, is used to indicate the need for cleaning or replacing of the electrodes.

7. A generator for generating positive and negative ions comprising:

ac high voltage generator;

at least one pair of ionizing electrodes provided with different polarity from the AC high-voltage generator, mounted in separate conducting cages located adjacent to each other, each of the cages provided with an opening opposite the electrode;

a balancing unit for balancing ion currents emmited by each of the electrodes, output from the ac high voltage being via the balancing unit to the electrodes, each electrode provided with different polarity; and

an element for producing a voltage drop connected to each of the cages for generating an external electric field by using the ion current from each electrode across to the cage in which the electrode is mounted, passing through the element for producing a voltage drop,

whereby some of the ions generated from the electrodes escape outside the cages due to the presence of electric field between the cages.

8. The generator of Claim 7, wherein the ionizing electrodes are connected to different polarity of the AC high-voltage generator is carried out by two inversely-connected rectifying diodes.

9. The generator of Claim 8, wherein the element for producing a voltage drop is a Zener diode with a condenser.

10. The generator according to Claim 7, further provided with a comparator for comparing a feedback signal corresponding to the ion current emmited through at least one cage with a reference signal to control the AC high-voltage generator, for stabilizing ion emmision.

11. The generator according to Claim 7, further provided with a comparator for comparing a feedback signal corresponding to the ion current emmited through at least one electrode with a reference signal to control the AC high-voltage generator, for stabilizing ion emmision.

12. The generator according to Claim 7, further provided with an indicator for indicating the need for cleaning the electrodes from dust or repair.

13. A method of generating positive and negative ions substantially as described in the aforementioed specification and accompanying drawings.

14. A generator for generating positive and negative ions substantially as described in the aforementioed specification and accompanying drawings.